



**Lubrizol**

**PEARLBOND™ TPU  
FOR HOT MELTS  
ADHESIVES  
PRODUCT  
SELECTION  
GUIDE**

**LUBRIZOL  
ENGINEERED  
POLYMERS**

**ADVANCING MATERIALS.  
ELEVATING PERFORMANCE.**

# TPU (THERMOPLASTIC POLYURETHANE) FOR HOT MELT ADHESIVES

IDENTIFICATION	TPU Polyol type	MELTING BEHAVIOR				COLD BEH. (ASTM E1356-98)	CRYSTALLIZATION BEHAVIOR		THERMO-PLASTICITY (LZMM-RD01-68-A)	PROCESS TEMPERATURE		MECHANICAL PROPERTIES				BONDING PROCESS (LZMM-RD01-70)	RESISTANCE TO			APPLICATION		POTENTIAL COMPLIANCE***	
		Hardness (Shore A/D) (ASTM D2240)	Melting Peak by DSC (°C) (ASTM E794-06)	MFI (g/10 min) (ASTM D1238) 170°C 2.16Kg	MFI (g/10 min) (ASTM D1238) 170°C 21.6Kg		Recrystallization time by DSC (min) (ASTM E794-06)	Recrystallization time (LZMM-RD01-12B)		Softening point by Kofler (°C) (LZMM-RD01-70)	Melting point by Kofler (°C) (LZMM-RD01-70)	Tensile Strength (MPa) (ASTM D412)	Tensile Strength at 100% (MPa) (ASTM D412)	Tensile Strength at 300% (MPa) (ASTM D412)	Elongation at break (%) (ASTM D412)		Wash at 60 °C	Dry clean	Steam	Rotogravure, Slot Die, Roll-coating, Blown film	Flat die extrusion, Blown film	bluesign®	OEKO-TEX® 100
Pearlbond™ 100	PCL (1)	51D	56	15-30	NA	-41	31	+	Very high	55-60	64-68	NA	NA	NA	NA	60	-	-	-	√		Yes	Yes
Pearlbond™ 103	PCL (1)	51D	59	60-100	NA	-41	25	++	Very high	55-60	60-64	NA	NA	NA	NA	60	-	-	-	√			
Pearlbond™ 220	PCL (1)	54D	58	15-30	NA	-40	25	++	Very high	55-60	60-65	NA	NA	NA	NA	60	-	-	-	√			
Pearlbond™ 223	PCL (1)	54D	61	60-100	NA	-41	22	++	Very high	60-65	60-65	NA	NA	NA	NA	60	-	-	-	√			
Pearlbond™ 106	Polyester	93A	53	10-30	NA	-39	31	+	Very high	55-60	60-70	NA	NA	NA	NA	60	-	-	-	√		Yes	Yes
Pearlbond™ ECO 590	Polyester	52D	65	30-60	NA	-40	17	+++	Very high	65-75	70-80	12	2	3	500	67	+	-	-	√		Yes	Yes
Pearlbond™ 1160L	Polyester	90A	49	4-9	NA	-39	26	++	High	80-85	105-110	25	5	5	760	65	±	-	-		√	Yes	Yes
Pearlbond™ 5713	Polyester	90A	49	NA	20-50	-43	50	+	High	85-90	115-120	38	5	9	550	82	±	±	±		√	Yes	Yes
Pearlbond™ 5713 F1*	Polyester	90A	47	10-25	NA	-44	>50	+	Medium	85-90	100-105	31	4	6	700	68	±	±	±		√	Yes	Yes
Pearlbond™ 700	Polyester	97A	112	30-50	NA	NA	5	++++	Very high	100-110	115-125	38	20	30	460	110	+	+	+	√		Yes	Yes
Pearlbond™700 HMS EXP*	Polyester	55D	106	NA	15-40	NA	10	+++	High	130-140	180-190	40	19	30	435	120	+	+	+		√	Yes	Yes
Pearlbond™ 702	Polyester	93A	93	30-50	NA	NA	25	++	High	90-100	105-115	15	9	11	550	100	+	+	±	√	√	Yes	Yes
Pearlbond™ 300	Polyester	70A	48	55-95	NA	-33	>50	+	High	60-70	70-80	9	1	2,4	855	80	-	-	-	√		Yes	Yes
Pearlbond™ 301	Polyester	55A	50	30-50	NA	-30	>50	+	High	90-100	100-110	13	1	1,5	950	90	±	-	-	√	√	Yes	Yes
Pearlbond™ 302	Polyester	55A	75	15-30	NA	-30	>50	+	High	100-110	110-120	14	1,3	1,6	950	100	+	-	-	√	√	Yes	Yes
Pearlbond™ 360	Polyether	68A	75	15-35	NA	-49	>50	-	Medium	115-125	125-135	13	3	4	1070	110	+	-	-	√	√	Yes	Yes
Pearlbond™ 920	PCL (1) (aliphatic)	82A	120	5-15	NA	-50	40	++	High	125-135	145-155	38	5,4	10,5	725	125	+	-	+	√	√	Yes	Yes
Pearlbond™ 960	Polyether (aliphatic)	69A	72	NA	20-40	-10	>50	-	Low	125-135	170-180	44	2,4	7,3	510	100	+	-	+		√	No	No
Pearlbond™ UB410A*	Polyester	70A	37	40-100	NA	-43	>50	-	Medium	70-80	80-90	15	2	4	705	80	±	±	-	√	√		
Pearlbond™ UB410B*	Polyester	70A	38	10-30	NA	-45	>50	-	Medium	90-100	100-110	22	1,9	3,8	800	85	±	±	-	√	√		
Pearlbond™ 415L EXP	Polyester	70A	37 (B)	40-100	NA	-43	>50	-	Medium	70-80	80-90	15	2	4	705	80	±	±	-	√	√		
Pearlbond™ 415 EXP	Polyester	70A	38 (B)	10-30	NA	-45	>50	-	Medium	90-100	100-110	22	2	4	800	85	±	±	-	√	√		
Pearlbond™ 5717 NT2	Polyester	70A	71	20-40	NA	-30	>50	-	Low	65-75	75-85	10	2,5	4	750	75	±	±	-	√	√		
Pearlbond™ DIPP 119	PCL (1)	70A	63	5-20	NA	-30	>50	-	Medium	100-110	120-130	20	3	4	750	100	+	-	-		√	Yes	Yes
Pearlbond™ UB400**	Polyester	78A	126	NA	20-50	-18	>50	-	Low	125-135	140-150	34	4	7	660	122	+	-	+	√	√	Yes	Yes
Pearlbond™ 12C75	Polyester	78A	62	10-30	NA	-32	>50	-	Low	120-130	130-140	24	4	5	650	120	+	-	+	√		Yes	Yes
Pearlbond™ 12F75UV	Polyester	78A	62	NA	60-90	-30	>50	-	Low	130-140	140-150	30	4	6,5	525	130	+	-	+		√	Yes	Yes
Pearlbond™ HM 85AB0 NAT 021*	Polyester	84A	139	10-30	NA	-26	>50	-	Low	115-125	135-145	21	4	6,3	740	125	+	+	±	√	√	Yes	Yes
Pearlbond™ 5708 F3	Polyester	86A	132	NA	25-45	-44	>50	-	Very Low	140-150	170-180	52	5	10	600	145	+	-	+	√	√	Yes	Yes
Pearlbond™ HM 95AB0 NAT 021*	Polyester	94A	161	5-20	NA	-26	>50	-	Low	150-160	165-175	25	9	12	630	160	+	+	+	√	√	Yes	Yes

<10' ++++  
10-20' +++  
21-30' ++  
31-50' +  
> 50' -

All products may be available, upon request, in powder form as per below:  
Maximum Particle Size of powder in µm (100%) <106 <250 <355 <500  
Grade S X F L

G - Good  
F - Fair  
NR - Not recommended

\* Product available under restricted terms/regions, please contact your Lubrizol sales contact \*\* Only available in APAC  
\*\*\* Indicative information with no responsibility whatsoever from Lubrizol. Final assesment should be done on the final piece.  
(1) PCL = Polycaprolactone Copolyester

# LUBRIZOL GLOBAL PRESENCE

Our global presence means we have the application and development laboratories (with technical service ability) already in place, as well as worldwide production capabilities and renowned customer service. We are also a specialty producer of performance coatings and other unique products for apparel. Teaming with Lubrizol simplifies a complex global supply chain.

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